

SXT1811
18.1" SXGA TFT NEMA 4/12
Flat Panel Monitor

User's Guide

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Introduction

The SXT1811 is an 18.1" SXGA (1280 x 1024) TFT industrial flat panel monitor for use in NEMA 4 and NEMA 12 applications. Graphics and text can be displayed on the monitor in up to 16.7 million colors and in the modes listed below. Additionally, PAL NTSC and SECAM video can be displayed either full screen or as a picture in picture overlaid on the PC screen. When the monitor is being driven in modes other than SXGA, it will automatically expand and scale the image to fill all 1280 x 1024 pixels. The unit is fully self-contained needing only to be panel mounted in an appropriate enclosure and connected to 120/240 VAC and a VGA source. The monitor features a bright 200-nit LCD display with 50,000-hour backlights and conveniently located front panel controls with on screen menus for easy set up and adjustment. Viewing angle is 160 degrees vertical and 160 degrees horizontal. The SXT1811 is available with an optional integrated analog resistive touch screen, 304 stainless steel bezel and 18-36VDC input. Each SXT1811 is shipped complete with user manual, mounting hardware and all cables. Monitors equipped with touch screens are shipped with drivers for Windows 95 , 98 and Windows NT .

Video Modes Supported

MODE		HORIZONTAL SYNC RATE KHZ	VERTICAL SYNC RATE Hz	DOT FREQUENCY MHZ	EXPANSION FACTOR	
					Vertical	HORIZONTAL
VGA	VESA 640 x 480	31.5	60	25.175	2	2
		37.9	72	31.500		
		37.5	75	31.500		
		43.3	85	36.000		
IBM	720 X 400	31.5	70	28.322	1.7	1.7
		37.9	85	35.500		
SVGA	VESA 800 x 600	35.1	56	36.000	1.5	1.5
		37.9	60	40.000		
		48.1	72	50.000		
		46.9	75	49.500		
		53.7	85	56.250		
XGA	VESA 1024 x 768	48.4	60	65.000	1.25	1.25
		56.5	70	75.000		
		57.5	72	75.000		
		60.0	75	78.780		
		68.7	85	94.500		
		35.5	87	44.900		
	INTERLACED					
SXGA	VESA 1280 X 1024	64.0	60	108.000	1	1
		78.1	72	135.000		
		80.0	75	135.000		

Specifications

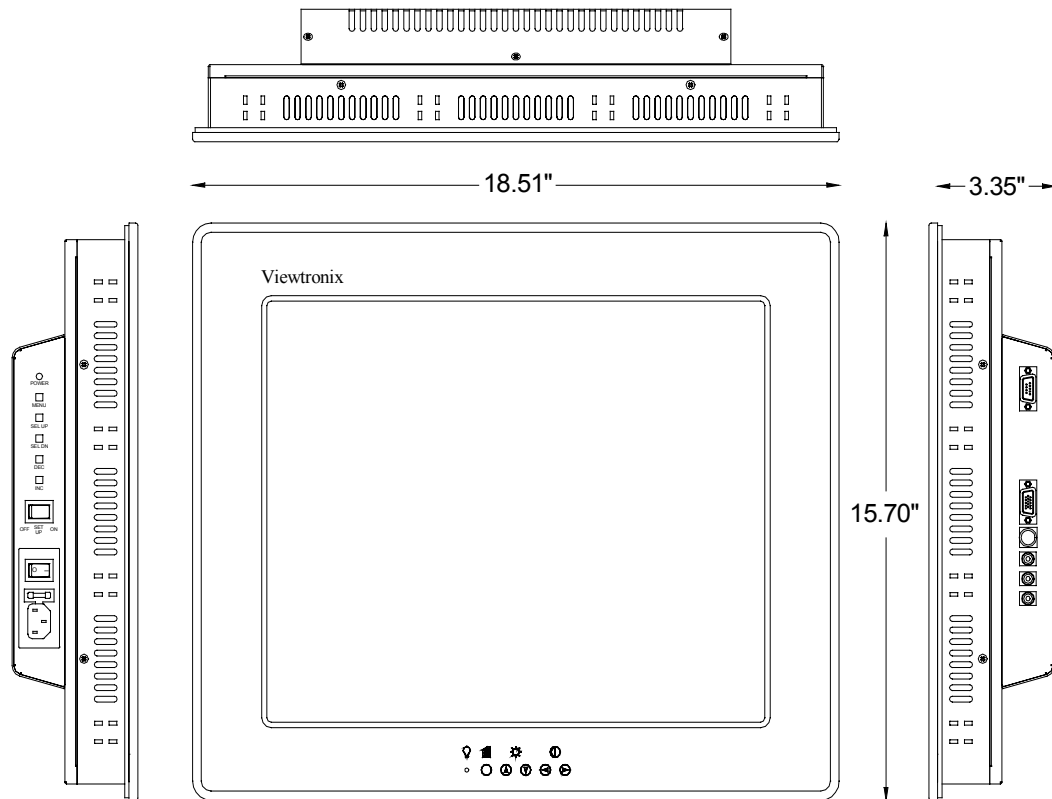
DISPLAY	
Parameter	Specification
Display Size	18.1" Diagonal
Active Area	14.134" (H) x 11.307" (V)
Pixel Format	1280 (H) x 1024 (V) Pixels (1 Pixel = R + G + B Dots)
Brightness	200 Nit Typical
Back Light Life	50,000 Hrs Typical
Contrast Ratio	300:1 Typical
Viewing Angle	160 Degrees Vertical and Horizontal
Number Colors	16.7 Million

PHYSICAL	
PARAMETER	SPECIFICATION
Monitor Outside Dimensions	15.70" (H) x 18.51" (W) x 3.73" (D)
Monitor Weight	28 Pounds
Operating Temperature	0 ~ 50 Degrees Centigrade
Storage Temperature	-20 ~ 60 Degrees Centigrade
Relative Humidity	< 95%, Ta < 40 Degrees Centigrade, < 85%, 40 < Ta < 50 Degrees Centigrade
Operating Vibration	5 ~ 500 Hz, 1G
Operating Shock	15G for 11ms
Operating Altitude	10,000 Feet Above Sea Level

ELECTRICAL	
PARAMETER	SPECIFICATION
Input Voltage	90 ~ 264 VAC, 47 ~ 440 Hz (18-36 VDC Optional)
Input Power	85 W

Compliance	
Parameter	Specification
NEMA Rating	NEMA 4/12 From front when properly installed in an enclosure. (Optional Stainless Steel Bezel Available)
EMC	FCC Part 15, Class A / Industry Canada ICES-003 Issue 2, Rev. 1 / EN61000-4-2, 4-3, 4-4 / EMC Directive 89/336/EEC (Pending)
Safety	UL-1950 / CUL/CSA 22.2 950 M93/ EN60950 / Low Voltage Directive 73/23/EEC

Front and Side View of Monitor

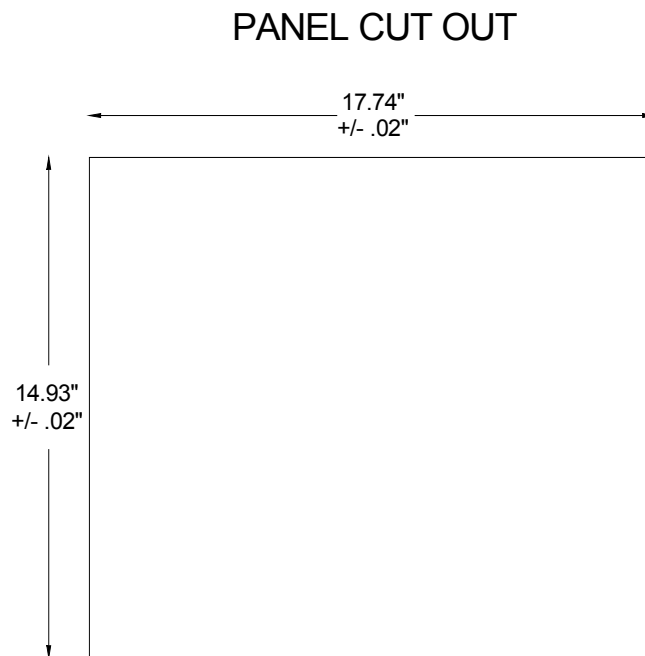


Installation of Monitor

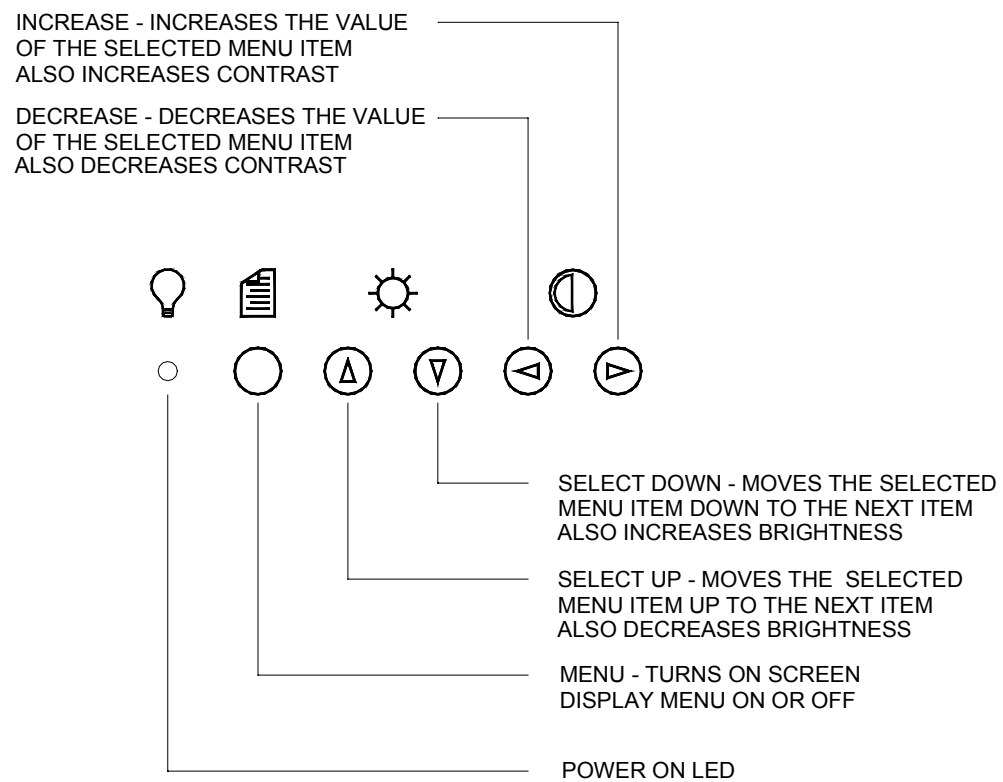
This monitor is intended to be mounted in and used where NEMA 4 and NEMA 12 type enclosures are employed. When mounted properly, the monitor meets or exceeds the sealing requirements set forth in the NEMA 4 and NEMA 12 specifications. The monitor uses “U”-shaped clips and a special gasket to achieve the proper seal.

To install the monitor, make a cutout per the diagram below in one of the walls of your NEMA enclosure. Enclosures made of heavier gauge metal work better in that they won't deform or bend as easily when the monitor's sealing gasket is compressed. Next hold the monitor in place while you install the mounting clips. Tighten the clips in a cross pattern. This will help to develop an even pressure on the sealing gasket. Tighten the clips to the point where the back of the monitor's front bezel just begins to contact the front of the NEMA enclosure. **DO NOT OVER TIGHTEN AS DAMAGE CAN RESULT IN THE MONITOR CAUSING LOSS OF SEALING INTEGRITY.**

Cutout Pattern for Monitor



Front Panel Controls



Mode and Image Adjustment

Not all video controllers produce exactly the same video output levels or the same timing. The following procedure can be used to select the desired video mode as well as optimize your monitor's image quality. When adjusting your monitor, the use of video test software such as DisplayMate for Windows by SONERA Technologies can be very beneficial.

The SXT1811 automatically adjusts to most incoming video signals. Usually, only brightness, contrast and phase need to be adjusted by the user. "On Screen Programming" helps make setup and adjustment of these settings easy. The menus are selected and the menu items are adjusted using the buttons located on the monitor's front panel. These buttons are enabled or disabled by a rocker switch labeled "SET UP" located on the side of the monitor. This feature is provided to inhibit tampering once the monitor is in actual use. Turn the SET UP switch to the 'On' position to enable set up and adjustment. If you are using a "Plus and Play" operating system adjust your desktop display settings to the following before connecting the SXT1811 to your computer:

Vertical Refresh:	60Hz
Resolution:	1280 x1024

If you are using a "Plug and Play" operating system, the monitor type and default settings are automatically detected by the operating system. If you are not using "Plug and Play", set your monitor type to:

Manufacture:	(Standard monitor type)
Model:	Super VGA 1280 x 1024 @75Hz
Vertical Refresh:	60Hz
Resolution:	1280 x1024

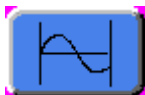
Once the monitor is powered up, press the *menu* button. After the On Screen Display (OSD) menu appears select the "Brightness and Contrast" function by continuing to depress the menu button until it's graphic is highlighted.



Once this graphic is highlighted the following image will appear:

Brightness		Increase/decrease panel brightness level, total: 100 steps
Contrast		Increase/decrease panel contrast level, total: 100 steps

Use the ↑ and ↓ buttons to select either contrast or brightness. Now use ← and → buttons to set the desired level. Once brightness and contrast have been set the phase should be adjusted. Continue pressing the *menu* button until "Frequency and Phase" graphic is highlighted.



Once this graphic is highlighted the following image will appear:

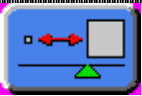
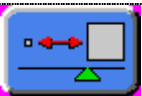
Frequency		Adjust the image horizontal size
Phase		Fine-tune the data sampling position (adjust image quality)

Use the ↑ and ↓ buttons to select phase. Now use ← and → buttons to fine-tune the image quality. After completing this adjustment, exit the set up menu by either waiting about five seconds without further button depressions or by hitting the *menu* button and scrolling until the Exit graphic is highlighted. Once the following graphic is highlighted press the → to exit.



Summary of On Screen Display (OSD) Functions

	Brightness and Contrast : Brightness Increase/decrease panel brightness level, total: 100 steps Contrast Increase/decrease panel contrast level, total: 100 steps
	Color Temperature : 9500K / 8000K / 6500K / 5000K Adjust the warmth of the image displayed. The higher temperature the coolest image looks like. The lower temperature the warmest image looks like.
	Video Adjustment : (DISPLAYED IN VIDEO MODE ONLY) Color: adjust video color level Tint: adjust video tint level Sharpness: adjust video image sharpness level Video Type: DVD / VCR change brand width to match the source
	Frequency and Phase : (DISPLAYED IN PC MODE ONLY) Frequency Adjust the image horizontal size Phase Fine tune the data sampling position (adjust image quality)
	Video System : Select video system and input signals (DISPLAYED IN VIDEO MODE ONLY) AUTO : automatic detection of NTSC and PAL system (not applicable in SECAM system) NTSC / NTSC 4.43 : manual select NTSC system PAL / PAL M : manual select PAL system SECAM : manual select SECAM system
	Status : (DISPLAYED IN PC MODE ONLY) Display graphic information: resolution and frequency
	Position : Image up/down : Use ↑ and ↓ to move the image vertically Image left/right : Use ← and → buttons to move the image horizontally
	Rotation : (DISPLAYED IN VIDEO MODE ONLY) Rotates the image from landscape format to portrait format.
	Picture in Picture : (DISPLAYED IN PC MODE ONLY) PIP Size : Off / 1 / 2 / 3 Select PIP window size: close, size 1, size 2 & size 3 PIP Source : Auto / Comp / SVid Select video source to be display in PIP window: Auto – automatic detection of Composite or S video Comp – manual select composite video only SVid – manual select S-video only

	Horizontal Position  Vertical Position  Advanced PIP Settings : Brightness  Contrast  Sharpness  Tint  Color 	adjust the position of the PIP window horizontally adjust the position of the PIP window vertically adjust the image brightness of the PIP window adjust the image contrast of the PIP window adjust the image sharpness of the PIP window adjust the color of the image of the PIP window adjust the tint of the image of the PIP window
	Video Scaling : (DISPLAYED IN VIDEO MODE ONLY) Use the ↑ and ← arrow keys to select the following scaling modes. Normal Letterbox Letterbox with Subtitles Nonlinear Scaling Modes : Horiz Clipping / Horiz Offset / Horiz Stretch / Vert Clipping / Vert Offset / Vert Stretch	
	Graphic Scaling Modes : (DISPLAYED IN PC MODE ONLY) Use the ↑ and ← arrow keys to choose a scaler mode. Use the ⇐ and ⇒ arrow keys to modify a following scaler parameters. One to One : Horizontal Pan  Vertical Pan  Fill Screen : enable full screen expansion for lower resolution Image Fill to Aspect ratio : enable fill screen expansion for lower resolution image according to aspect ratio. Nonlinear Scaling Modes : Horiz Clipping / Horiz Offset / Horiz Stretch / Vert Clipping / Vert Offset / Vert Stretch	
	Language : Select OSD menu language display English only	
	Video source : Select the input video signal Analog RGB / Component Video / Composite Video / S-Video	
	Utilities : User Setting : User Timeout : adjust the OSD menu timeout period in a step of 5 seconds DPMS : Disable / Enable the DPMS function Auto Source Select : Off / Low / High (disable or enable video source detection) OSD Setting : OSD Horz Position  : move the OSD menu horizontally OSD Vert Position  : move the OSD menu vertically OSD Background : Translucent / Opaque Freeze Frame : Freeze the image (use "⇒" button) Zoom : Zoom level : enable the zoom in function on the image displayed. Use "⇒" button to zoom in the image. Use "⇐" button to decrease the zoomed image. Horizontal Pan  Vertical Pan 	

	Direct Access #1: Define the hot key function (⇐ and ⇒) for one of the following adjustments : Brightness / Contrast / Volume / Freeze / Zoom / Video Source* Direct Access #2: Define the hot key function (⏮ and ⏭) for one of the following adjustments : Brightness / Contrast / Volume / Freeze / Zoom / Video Source* Display Orientation : Normal / Horizontal Inverse / Vertical Inverse / Inverse Calibrate RGB Gain : Color Calibration (DISPLAYED IN PC MODE ONLY) Load Factory Defaults : Recall factory default settings. * By pressing the hot key, the source is in sequence of Analog RGB/Component Video/Composite Video/S-Video.
	Volume :  Adjust the audio volume level (functions only if the audio add-on installed)
	Exit menu Pressing the ⇒ exits the main menu

VGA Input Connector Pin Out

SIGNAL NAME	15-PIN D-SHELL (FEMALE)
Red	1
Green	2
Blue	3
	4
GND-Digital	5
GND-Red return	6
GND-Green return	7
GND-Blue return	8
	9
GND-Digital	10
	11
	12
Hsync	13
Vsync	14
	15

Xycom Automation, Inc.

734-429-4971 • Fax: 734-429-1010

1-800-AT-XYCOM • <http://www.xycom.com>

Northern Europe Sales: +44-1604-790-767

Southern Europe Sales: +39-011-770-53-11

